

## REMARKS

The present invention relates to the preparation of an epoxidation catalyst and to the process of preparing an alkylene oxide using such a catalyst. It has surprisingly been found that the selectivity of an epoxidation catalyst can be improved if water is removed from the silica carrier at a temperature in the range of from more than 200°C to 300°C prior to impregnation with a titanium halide.

In the Office Action, Claims 1-4, 6-11 and 13-20 were rejected under 35 USC 102(b) as being anticipated by U.S. Patent 6,114,552. While this patent does disclose in col. 4, line 1-9 that the drying can be performed at a temperature of 100°C to 700°C, Catalyst 1B in Example 1 is heated at a temperature above that of the claimed invention since the catalyst bed is cooled to 300°C after drying. See col. 8, lines 31-33 of the '552 patent.

As shown in Table 1 of the present application, Applicants have surprisingly found that drying the silica at a temperature of from more than 200°C to 300°C surprisingly increases the selectivity of the catalyst.

There are no specific examples in the '552 patent in which the silica is dried within the claimed temperature range. Accordingly, Applicants submit that the claimed invention is not disclosed with sufficient specificity to constitute an anticipation of the claims. See *Atofina The Great Lights Chem Corp., 441 F.3(d) 991, 999 (Fed. Cir. 2006)*. Accordingly, Applicants submit that Claims 1-4, 6-11 and 13-20 are not anticipated by the '552 patent.

In the Office Action, Claims 1-20 were rejected under 35 USC 103(a) as being unpatentable over Han et al, U.S. Patent 6,114,552. As discussed above, there are no specific examples in the '552 patent of drying the silica at a temperature within the claimed range. Accordingly, because of the unexpected results of improved selectivity achieved by the claimed invention, Applicants submit that it would not have been obvious to have dried the silica at a temperature within the claimed range. Additionally, the '552 patent is directed to an epoxidation catalyst having a high surface area silicate support having a surface area greater than 1100 m<sup>2</sup>/g. See Abstract of the '552 patent. Claims 5 and 12 of the present application add the limitation that the silica gel carrier has a surface area of at most 500 m<sup>2</sup>/g. The '552 patent teaches away from this limitation in that it categorizes supports having surface areas less than m<sup>2</sup>/g in Examples 2 and 3 as being comparative examples which are not as effective as the claimed invention in the '552 patent. Accordingly, Applicants submit that Claims 5 and 12

provide an additional basis for establishing non-obviousness of the claimed invention over the teachings of the '552 patent.

Finally, Claims 1-20 were rejected under 35 USC 112 second paragraph as being indefinite. In particular, the Examiner indicated that the definition of "weight average particle size" is not clear. Applicants respectfully submit that this is a term well known by those of skill in the art. A search of granted U.S. patents from 2001 – 2007 identified over 570 patents in which the term "weight average particle size" is used. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

In view of the foregoing, Applicants submit that the claims are in condition for allowance and favorable consideration by the Examiner is requested. Should the Examiner find any impediment to the prompt allowance of the claims which could be corrected by a telephone interview, the Examiner is requested to initiate such an interview with the undersigned.

Respectfully submitted,

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